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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/551,593	09/30/2005	Yuji Hiroshige	58666US005	5641

32692 7590 11/28/2006

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EXAMINER	
THOMAS, JAISON P	

ART UNIT	PAPER NUMBER
1751	

DATE MAILED: 11/28/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/551,593	HIROSHIGE ET AL.	
	Examiner	Art Unit	
	Jaison P. Thomas	1751	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *30 September 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *7-26* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *7-26* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☒ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *2/21/2006*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 7-26 rejected under 35 U.S.C. 102(b) as being anticipated by Kojima et al. (US Patent 4654255).

Kojima teaches an adhesive composition made from 0.01 to 10 parts by weight of an unsaturated fatty acid combined with 100 parts by weight epoxy group containing olefin (Abstract). The epoxy group containing olefin polymer can further be a copolymer comprised of 50-99.6 weight percent of ethylene, 0.05-50 weight percent of a glycidyl group containing monomer, and 0-49.95 weight percent of an ethylenically unsaturated monomer. The ethylenically unsaturated monomer can further be methacrylic acid and esters thereof such as methyl and octadecyl acrylates. Other materials that can be used in the invention include thermoplastic and thermosetting resins including copolymers of ethylene and methyl, ethyl, propyl, isopropyl and butyl esters of acrylic or methacrylic acids. Kojima also teaches an embodiment where sheets of synthetic resins and rubber can be created mixed with fillers. Such fillers include iron oxide, boron nitride, aluminum flake and carbon fibers.

Please note the examiner construes the term "polymer" in the claims to read on both homo- and copolymers.

With respect to the claimed melting point limitations of Claim 8, the examiner respectfully submits that the prior art inherently meets the claimed limitation. Specifically, the reference teaches similar components produced and used in a similar manner to the claimed limitations and would inherently possess the melting points required.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 7-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kojima et al. (US Patent 4654255).

Kojima is relied upon as disclosed above. However, the reference is silent with respect to the "crystalline" and "non-crystalline" limitations of the polymers disclosed in Kojima.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to optimize the overall crystallinity levels of the Kojima polymer via selection of the monomers through routine experimentation for best results. As to optimization results, a patent will not be granted based upon the optimization of result

effective variables when the optimization is obtained through routine experimentation unless there is a showing of unexpected results which properly rebuts the prima facie case of obviousness. See *In re Boesch*, 617 F.2d 272, 276, 205 USPQ 215, 219 (CCPA 1980). See also *In re Woodruff*, 919 F.2d 1575, 1578, 16 USPQ2d 1934, 1936-37 (Fed. Cir. 1990), and *In re Aller*, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955).

3. Claims 7-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schmitt et al. (US Patent 5412035) in view of Rinde et al. (US Patent 5470622 A).

Schmitt et al. teaches a pressure sensitive adhesive comprised of a based resin which can be polyacrylate and an additive which is a side chain crystallizable (SCC) polymer (Abstract). The SCC polymer can be homopolymers of n-alkyl acrylates or methacrylates or can be copolymer with other monomers such as acrylic acid (Column 14, lines 5-15). Additional ingredients that can be included in the composition include antioxidants, tackifiers and fillers (Column 15, lines 18-22). Figure 4, marking 2 shows a sheet embodiment of the Schmitt invention.

Schmitt is relied upon as disclosed above, however, Schmitt does not teach filler that is specifically thermally conductive.

Rinde teaches a substrate which is enclosed with a heat recoverable backing with a layer of thermosetting adhesive between the substrate and the heat recoverable article (Abstract). The adhesive is comprised of a thermoplastic and thermosetting resin. The thermoplastic resin can include acrylic resins such polymethyl methacrylate (Column 4, line 9). Thermally conductive fillers can be distributed into the adhesive

which include boron nitride, alumina or aluminum nitride. Rinde teaches that such fillers are particularly useful for applications for efficient heat transfer (Column 9, lines 48-54).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to add a thermally conductive filler to the adhesive of Schmitt as he suggests the addition of fillers to his adhesive composition and the thermally conductive filler of Rinde in the analogous art of thermally conductive adhesives is shown to provide efficient heat transfer from a substrate to heat recoverable article i.e. heatsink.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jaison P. Thomas whose telephone number is (571) 272-8917. The examiner can normally be reached on Mon-Fri 8:30 am to 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Douglas McGinty can be reached on (571) 272-1029. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Jaison Thomas
Examiner
11/15/2006

JT

Mark Kopec
Primary Examiner